

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

REC'D 31 JUL 2003

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(PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference<br>701758WO  | <b>FOR FURTHER ACTION</b>                                    | See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416). |
| International Application No.<br>PCT/AU03/00625  | International Filing Date<br>(day/month/year)<br>22 May 2003 | Priority Date (day/month/year)<br>24 January 2003  |
| International Patent Classification (IPC) or national classification and IPC<br>Int. Cl. 7 A01K 11/00, H04B 1/59 |  |  |
| Applicant<br>ALEIS TRAKIT PTY LTD et al  |  |  |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 sheet(s).

3. This report contains indications relating to the following items:

- I  Basis of the report
- II  Priority
- III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

|   |  |
|---|--|
| Date of submission of the demand<br>4 June 2003   | Date of completion of the report<br>21 July 2003                               |
| Name and mailing address of the IPEA/AU<br>AUSTRALIAN PATENT OFFICE<br>PO BOX 200, WODEN ACT 2606, AUSTRALIA<br>E-mail address: pct@ipaaustralia.gov.au<br>Facsimile No. (02) 6285 3929 | Authorized Officer<br><br><b>DALE E. SIVER</b><br>Telephone No. (02) 6283 2196 |

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/AU03/00625

**I. Basis of the report**

1. With regard to the elements of the international application:\*
  - the international application as originally filed.
  - the description, pages 1,3-12, as originally filed,  
pages , filed with the demand,  
pages 2 received on 15 July 2003 with the letter of 15 July 2003
  - the claims, pages 14-17 as originally filed,  
pages , as amended (together with any statement) under Article 19,  
pages , filed with the demand,  
pages 13 received on 15 July 2003 with the letter of 15 July 2003
  - the drawings, pages 1/2 to 2/2 as originally filed,  
pages , filed with the demand,  
pages , received on with the letter of
  - the sequence listing part of the description:  
pages , as originally filed  
pages , filed with the demand  
pages , received on with the letter of
2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.  
These elements were available or furnished to this Authority in the following language which is:
  - the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
  - the language of publication of the international application (under Rule 48.3(b)).
  - the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).
3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:
  - contained in the international application in written form.
  - filed together with the international application in computer readable form.
  - furnished subsequently to this Authority in written form.
  - furnished subsequently to this Authority in computer readable form.
  - The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
  - The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished .
4.  The amendments have resulted in the cancellation of:
  - the description, pages
  - the claims, Nos.
  - the drawings, sheets/fig.
5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/AU03/00625

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

|                               |             |     |
|-------------------------------|-------------|-----|
| Novelty (N)                   | Claims 1-29 | YES |
|                               | Claims      | NO  |
| Inventive step (IS)           | Claims 1-29 | YES |
|                               | Claims      | NO  |
| Industrial applicability (IA) | Claims 1-29 | YES |
|                               | Claims      | NO  |

## 2. Citations and explanations (Rule 70.7)

- D1 US 631829 B (PRATT) 20 NOVEMBER 2001  
 D2 US 5812049 A (UZI) 22 September 1998

Novelty (N)

D1 discloses a cattle management system, where livestock are made to pass single file through a chute. The citation further discloses an identifying apparatus for identifying the individual animals with electronic ID (or ear tags). In the feedlot of Figure 2 there are a number of pathways, and multiple readers (see column 12 lines 32-45). D1 does not disclose multiple readers with overlapping reading areas so the apparatus in claim 1 is novel in light of D1. In other words the readers of D1 do not satisfy the limitation of claim 1 line 10 that "each EID reading means is adapted to read any EID as the objects pass individually through any one of the pathways". For example in D1 the readers are designed to only read the tags that are in the vicinity of the particular pathway associated with that reader (ie. by controlling the readers range).

D2 discloses a system for monitoring a competitive activity (eg. human swimmers in a swimming pool). The swimmers carry tags, so that they can be electronically identified as they swim in the lanes. There are multiple readers (ie. for various lanes) and the readers have overlapping reading areas, so that an individual tag may be read by more than one reader. The system of D2 allows for recording the correct ID once per lap for each of the swimmers (see column 10). Thus subsequent reads by the same reader or reads by other readers in adjacent lanes will be ignored (and suppressed) by the system of D2. D2 differs from the new claim because of how the system filters out multiple reads. In D2 the swimmers must be assigned to a particular pathway (or lane) whilst claim 1 does not have that limitation. The present claim 1 achieves the filtering result by allowing objects to pass individually through a particular pathway and then reading many times but recording only once. The system of the present claim 1 is therefore different and satisfies novelty in relation to D2

Inventive step (IS)

The present claims are considered to involve an inventive step in relation to the prior art, because of the provision of multiple adjacent pathways, ability of any EID reading means to read any objects EID, and the dividing means allowing objects to pass individually through a particular pathway. Prior art teaches (generally speaking) one reader for each pathway, which requires careful control of the readers coverage area in relation to the size of the pathway. The readers of the present claimed apparatus can read any objects EID. The dividing means size can then be selected without careful control of the readers coverage area and therefore the system design can be simplified. This approach is not considered obvious to a person skilled in the art of livestock or human identification.

The present claims also solve a different problem than the prior art, ie. to decrease the time livestock spend in the yards waiting to be identified. The advantages of solving this problem are outlined on page 1 of the present application (see especially lines 14-20).

Industrial applicability (IA)

The claims are directed to an apparatus with industrial applicability

SUMMARY OF INVENTION

In one aspect the invention resides in an identifying apparatus to identify  
5 mobile objects, livestock or humans having electronic identification devices  
(hereinafter called EID's), typically transponders, the identifying apparatus  
including:

- 10 (i) multiple EID reading means, typically antennas, positioned in spaced apart  
relationship defining multiple adjacent pathways through which EID's  
carried by the objects, to be read, can pass in a single file through any one  
of the pathways and wherein each EID reading means is adapted to read  
any EID as the objects pass individually through any one of the pathways,  
and
- 15 (ii) computing means adapted to record each EID carried by an object only  
once irrespective the number of EID reading means reads an EID or  
irrespective of the direction or how many times the object passes the  
multiple pathways, the apparatus is also characterised by the provision of  
20 dividing means allowing objects to pass individually through a particular  
pathway.

Preferably the EID's are rumen pellets or ear tag transponders when the  
objects are livestock.

25 Preferably when the objects are humans the EID's can be electronic  
identification cards, neck tags, wrist or ankle bracelets or any other suitable  
EID's.

30 Preferably when the objects are humans the EID's can be used in  
conjunction with known biometric systems, typically face recognition systems or  
optical (eye/iris) recognition systems, or video or digital imaging systems.

CLAIMS

1. An identifying apparatus to identify objects typically livestock or humans having electronic identification devices (EID), typically transponders, the identifying apparatus including multiple EID reading means, typically antennas, positioned in spaced apart relationship defining multiple adjacent pathways through which EID's carried by the objects, to be read, can pass in a single file through any one of the pathways and wherein each EID reading means is adapted to read any EID as the objects pass individually through any one of the pathways and computing means adapted to record each EID carried by an object only once irrespective the number of EID reading means reads an EID or irrespective of the direction or how many times the object passes the multiple pathways, the apparatus is also characterised by the provision of dividing means allowing objects to pass individually through a particular pathway.
2. An identifying apparatus as claimed in claim 1 wherein the EID's are rumen pellet or ear tag transponders when the objects are livestock.
3. An identifying apparatus as claimed in claim 1 wherein the EID's are electronic identification cards, neck tags, wrist or ankle bracelets or any other suitable EID's when the objects are human beings.
4. An identifying apparatus as claimed in claim 1 wherein when the objects are humans the EID's are used in conjunction with known biometric systems, typically face recognition systems or optical (eye/iris) recognition systems, or video or digital imaging systems.
5. An identifying apparatus as claimed in any one of the above claims wherein the multiple pathways are multiple races that are adapted to enable reading of all EID's irrespective of the physical size of each object.